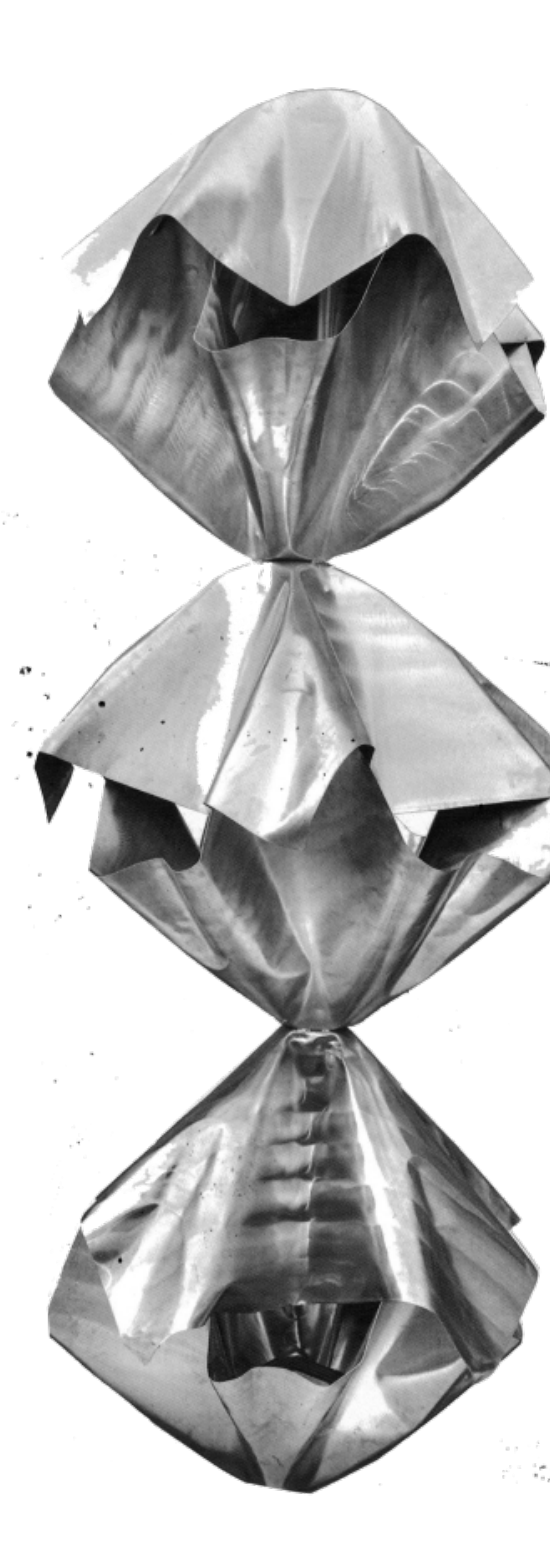


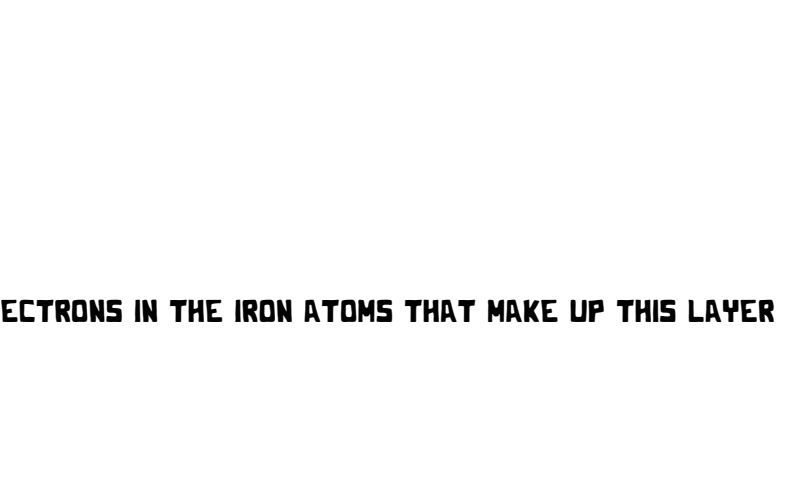
THE EARTH IS A GIANT MAGNET

When the Earth moves, everything within it moves as well

including us

including the liquid iron in its outer core.

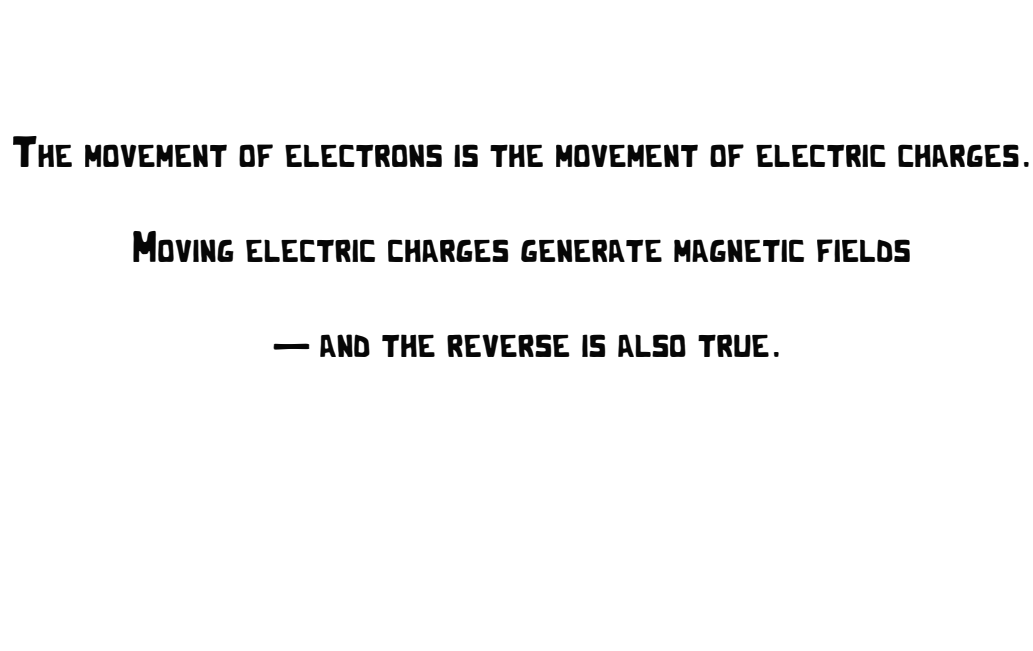
Including the free electrons in the iron atoms that make up this layer

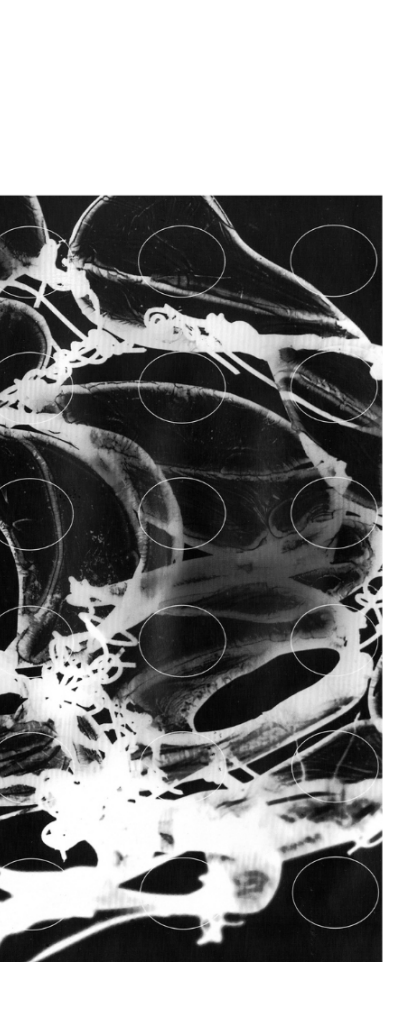


The movement of electrons is the movement of electric charges.

Moving electric charges generate magnetic fields

— and the reverse is also true.

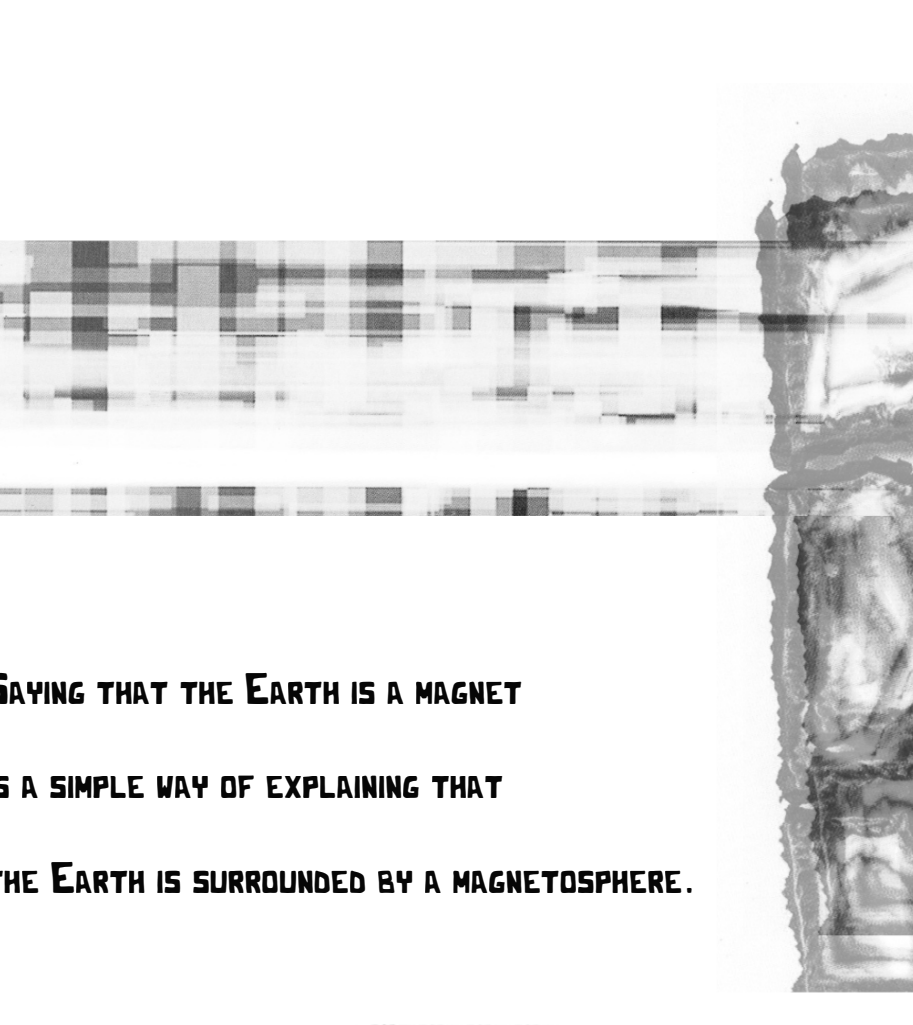




Saying that the Earth is a magnet

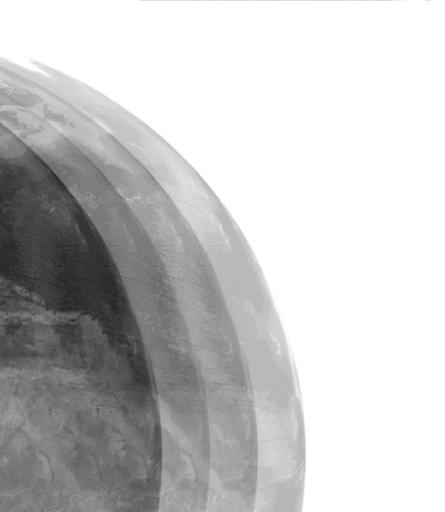
is a simple way of explaining that

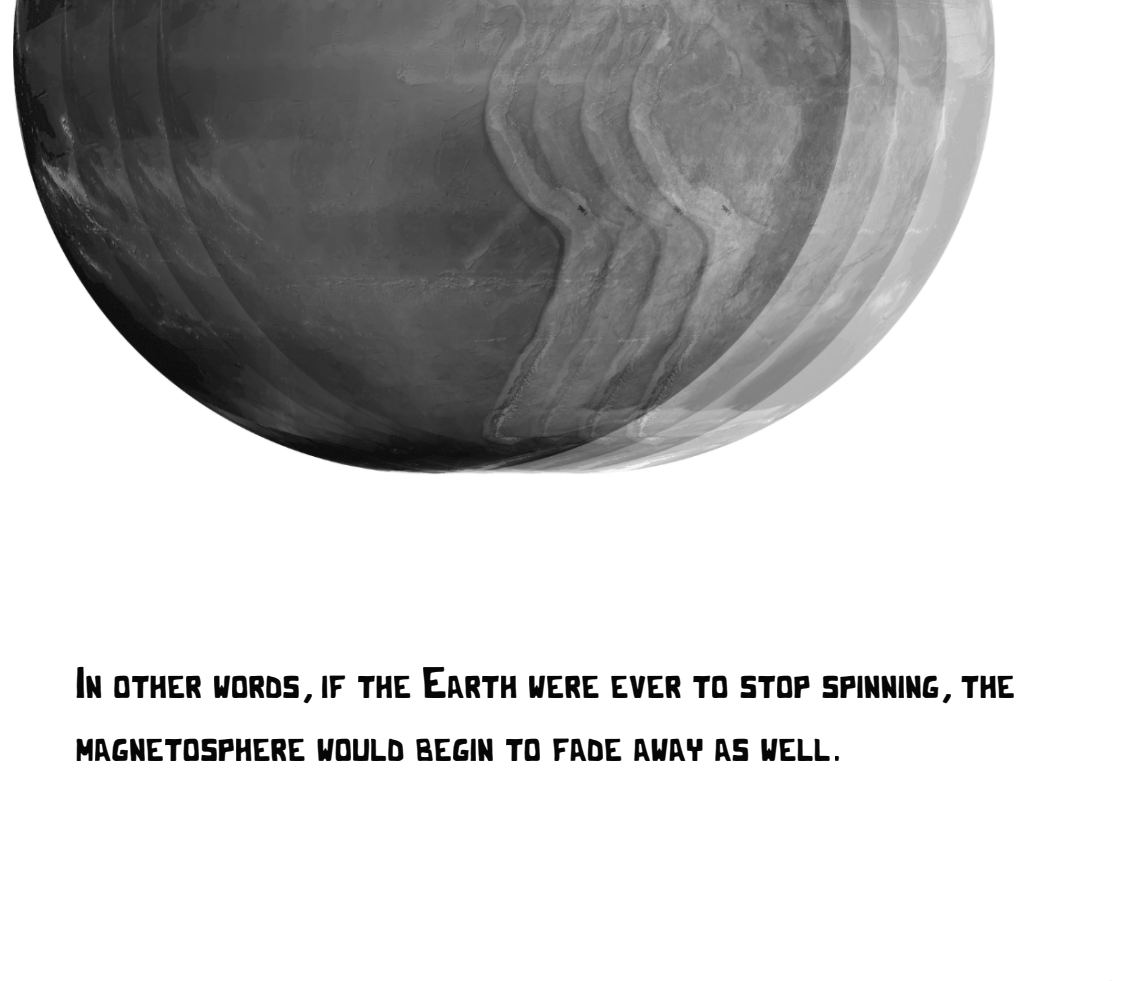
the Earth is surrounded by a magnetosphere.



In other words, if the Earth were ever to stop spinning, the magnetosphere would begin to fade away as well.

And it would become one of those things we only realize the value of after we lose it.

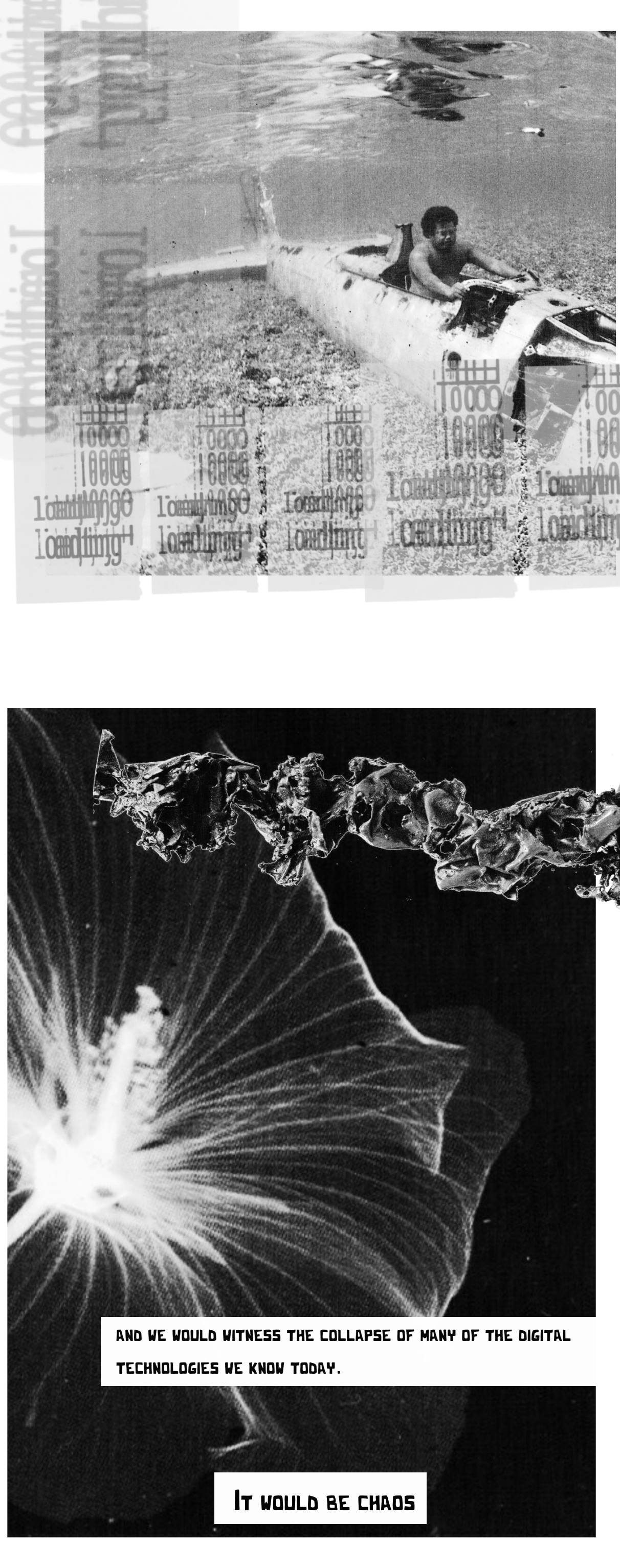




Because, besides the fact that we would be toasted by solar radiation

— which would no longer be blocked by the magnetosphere

we would also no longer have day and night



and we would witness the collapse of many of the digital technologies we know today.

It would be chaos

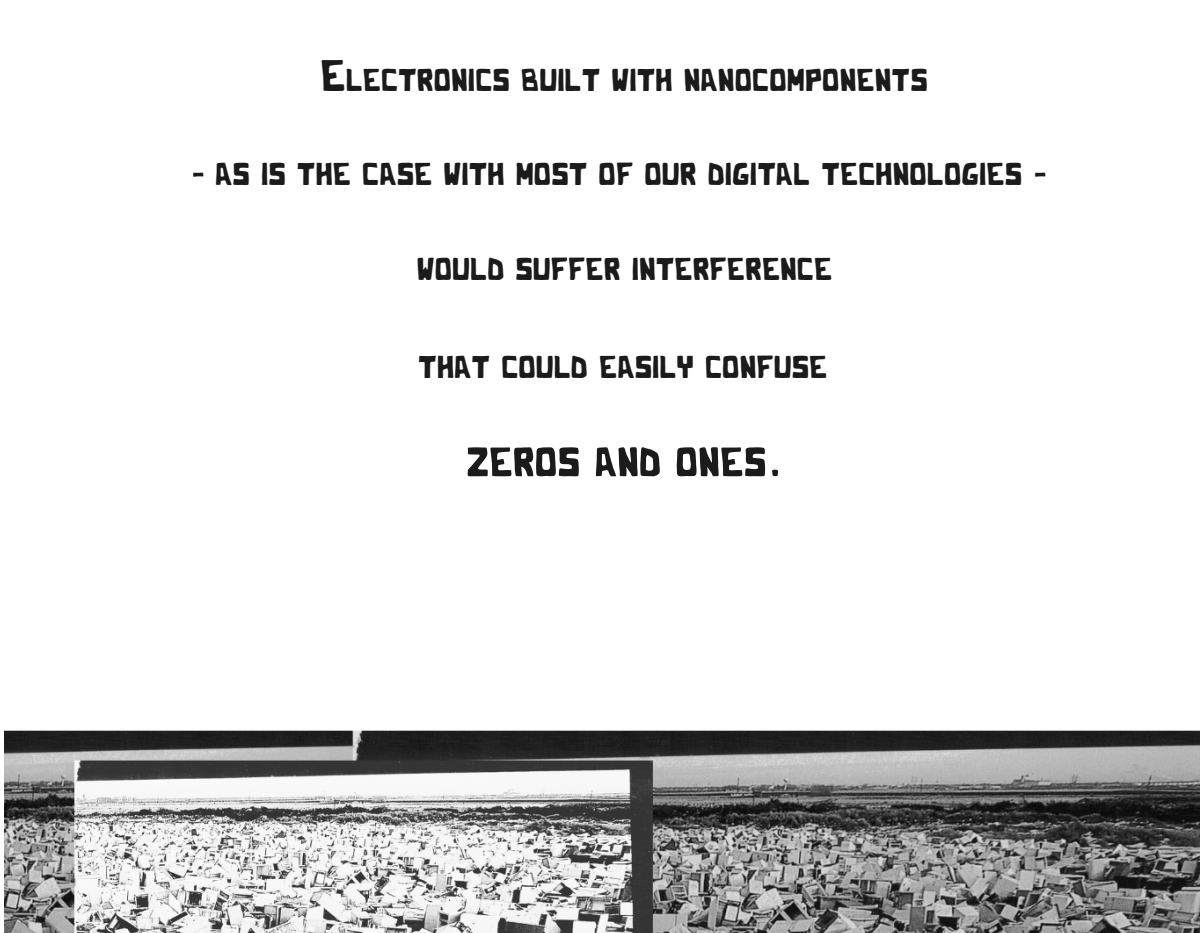
Electronics built with nanocomponents

- as is the case with most of our digital technologies -

would suffer interference

that could easily confuse

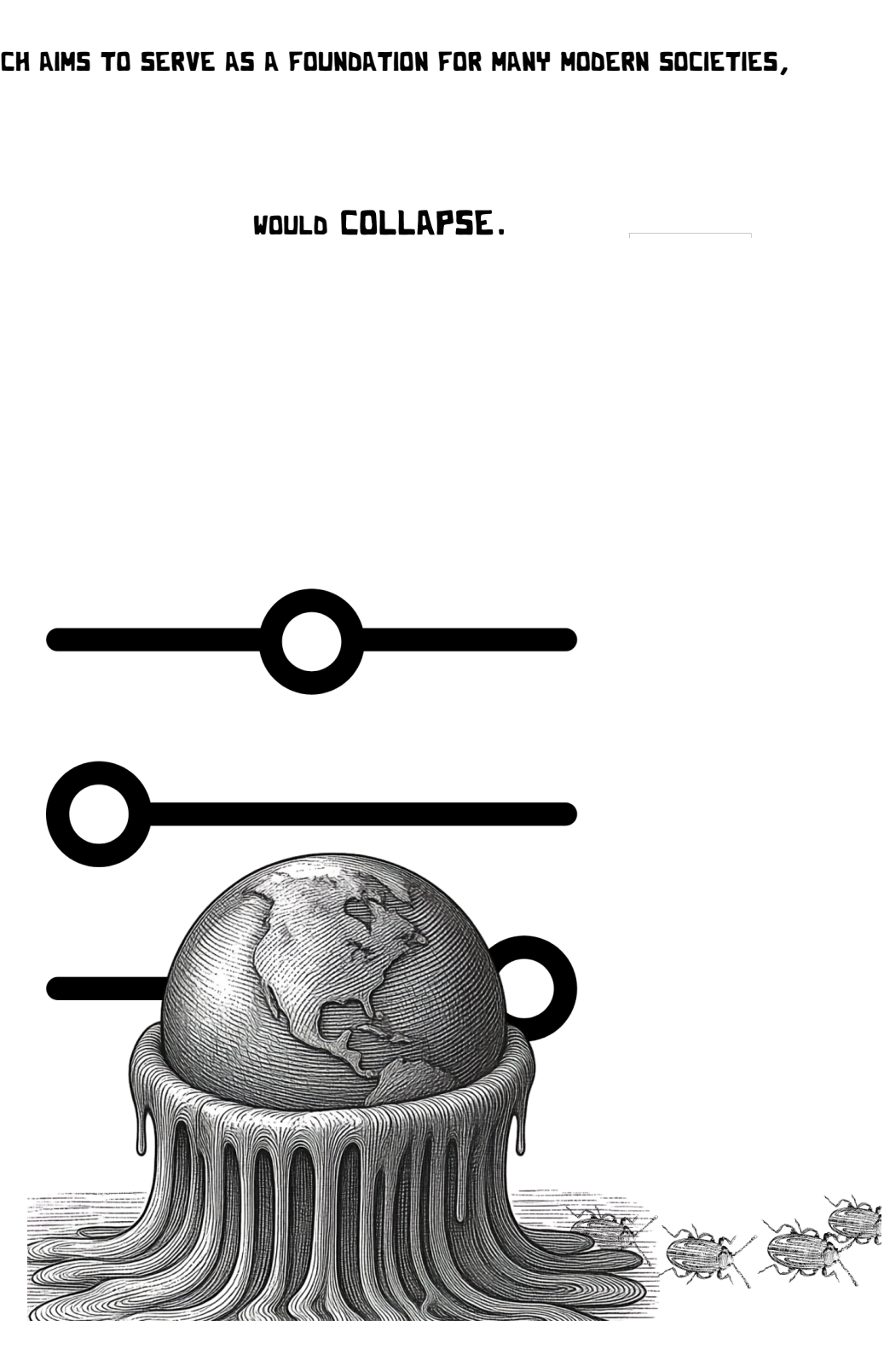
ZEROS AND ONES.



And then this entire digital data storage system,

which aims to serve as a foundation for many modern societies,

would COLLAPSE.



But if,

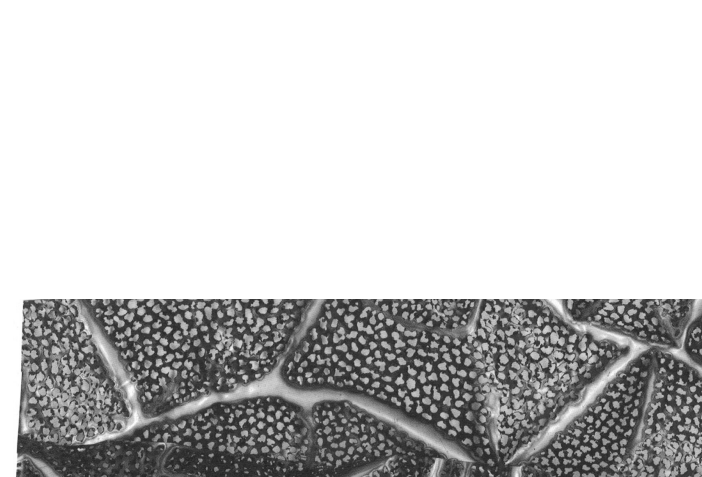
after a few days of being still,

the Earth started spinning again,

our magnetosphere would return

But by then, we would no longer have most of the communication devices we know today

because they would ALL have FAILED.



And in this hypothetical future, we could recover those large components

— obsolete the moment the Earth stopped spinning —

and use them to build new radio transmitters.

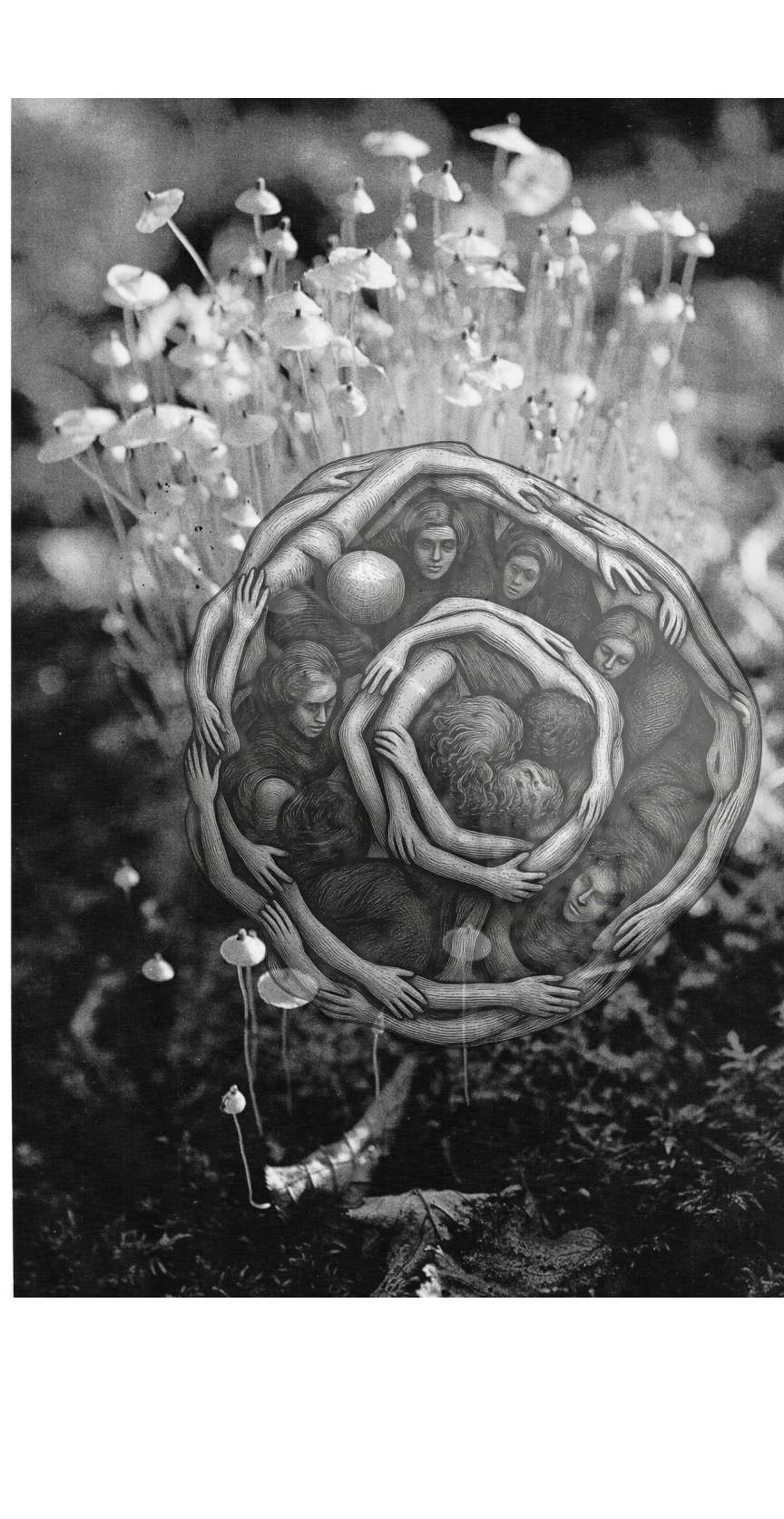
Who knows,

we might even return to using a quartz crystal and a cat's whisker

to tune into the waves sent by

the friends I made in Kenya.

That is, of course, once our telepathic and dream-based communication system stopped working for some reason.



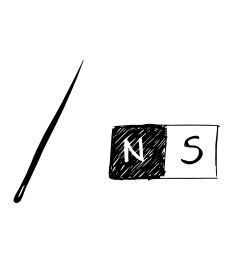
Zine written and designed by Marce Guerra, based on reflections developed through the research conducted within the JAPU project, for the development of Electronic Principles workshops.

Illustrated by priscila tomate - luneta zineteca

To experience Earth's magnetic field,

try **MAKING YOUR OWN COMPASS.**

MATERIALS:

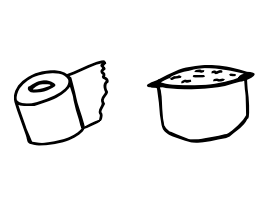


1 sewing needle

1 magnet

1 container of water

1 piece of toilet paper



HOW TO :

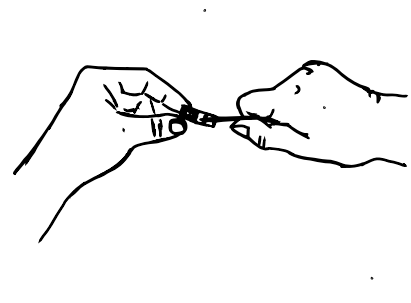
Stroke the needle several times in the magnet. This will magnetizes the needle.

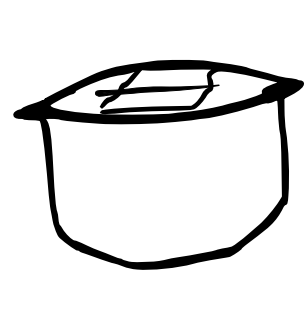
Place the piece of toilet paper gently on the surface of the water.

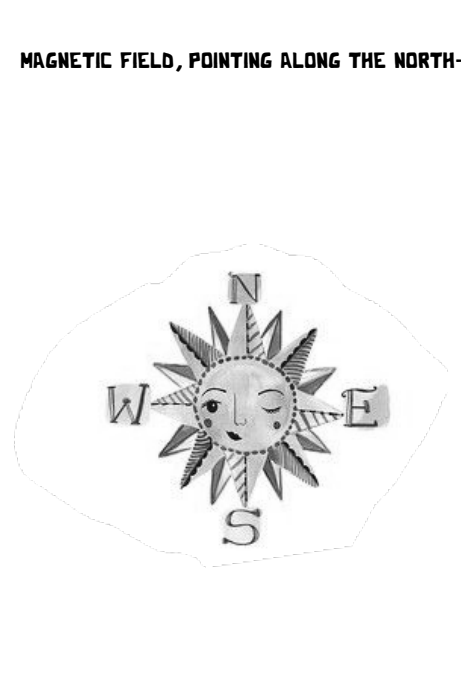
Carefully place the magnetized needle on top of the floating paper.

Wait.

The needle will slowly turn until it aligns with Earth's magnetic field, pointing along the north—south axis.







How do you know which end is north?

A magnetized needle has a north-seeking end and a south-seeking end, but to identify the north-pointing end, compare it with a known compass or use the position of the Sun. Once you've identified it, you can mark that end of the needle with a permanent marker for future use.